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Problems of Technology Generation, Absorption and Utilisation

Unorganised Labour and Rural Development

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EDITORIAL - SOME HIGHLIGHTS

I. General Economic Scene

State

Planning Commission

At the request of the government, the Planning Commission formulated a procedure for decentralised planning — plan formulation at the block level by Panchayat union councils. The government has asked the Commission also to present proposals on allocation of funds to the councils, the norms to be followed and the monitoring and evaluation of their usage. The Commission also received a copy of interim response of the Economic Advisory Council on An Employment Oriented Strategy for Development in 1990 for study and comment.

Climate and Prices

In the month of July, the south west monsoon was active in the southern districts. The northern parts of the state including Madras had many days of cloudy weather and some rain mostly light. The Department of meterology reports that between June 1 and July 26, rainfall in the state was deficient by 41 per cent. Against an average rainfall of 110 mm for the period, the state received only 65mm, while Chengai Anna and Pudukottai received normal rains, Chidambaram had no rain at all, Periyar was less by 92 per cent, Dharmapuri 87 per cent and Tirunelveli — Kattabomman by 76 per cent. On prices, CSO's monthly abstract of statistics received by the Institute is still as at January 1990 which was analysed in the July issue of the bulletin.

Power

In July the power supply in the state— free of all cuts — was normal despite the erratic supply of coal to the thermal plants. This was in particular in regard

to the Tuticorin thermal plant, where the 630 MW power production was reduced to 400 MW due to the heavy rains which inundated the mines of the eastern coal fields at Raniganj and the Bharat Coking Coal fields in Bihar. On top, there was a breakdown in the mechanical coal handling at Haldia port for a number of weeks, affecting the unloading of coal from the eastern fields. Against a monthly supply of 3.4 lakh tonnes, Tuticorin received only 2.5 lakh tonnes in April, 2.16 lakh tonnes in May and 1.4 lakh tonnes in June. Discussion with the Eastern Coal field authorities led to the decision to supply 2 lakh tonnes a month in July and August. The state also faces a serious shortage of power in the long run — requiring 9000 MW against which only 7500 MW will be available from all sources at the end of the Ninth Plan. Hence the VIII Plan power sector is allotted Rs. 3200 croress, with Rs. 445 crores for new schemes for gas turbines in the Cauvery basin, the North Madras Thermal stage II, Neyveli I and II expansion and Jayamkondan, Rs. 50 crores for windmills, Rs. 75 crores for R & M thermal and Hydro PHS and Rs. 20 crores for Parayalar H and S. For ongoing schemes Rs. 1225.46 crores are allotted for North Madras Thermal Stage I (Rs. 641.93 crores), Tuticorin Thermal Stage II (Rs. 304.75 crores), gas turbines at Basin Bridge (Rs. 123.25 crores) and Pykara (Rs 90.71 crores). Complementary loans from the Asian Development Bank are available for North Madras thermal I. The state is also going in for cogeneration which will provide 200 MW. Cogeneration produces electrical energy used for industrial and commercial heating and cooling purposes through sequential use of energy and will be used in sugar, rice, paper, rubber, textile processing and chemical units. It not only can be made available quickly at low cost. it also doubles fuel efficiency. So the state which faces a deficit of 2400 MW in the terminal year of the Eighth Plan, welcomes the perspectives of cogeneration.

The power situation in the country in July was fast returning to normal in the power deficit states like Karnataka. AP announced lifting its power cut on HT industries because of good rains and inflows into hydel reservoirs. West Bengal is still facing power cuts but with the commissioning of the third unit of the Kolaghat thermal station in August, its power situation will also improve. Kerala government announced its plans to sanction mini and micro power projects in the private sector on terms and conditions that are being working out. This is a pointer to the fact that the opening of the power sector to private enterprises which was set forth in the last issue of the Bulletin is limited by the fact that the unit cost of the power in the private sector will be higher than that of SEB who have older, cheaper plants and who do not have to provide for higher rates of depreciation, and given the high capital contribution (60 per cent) that it (the private enterprise) has to make, they will play only a minor part in power generation. While power generation for the country in the VIII Plan is programmed to cross 1 lakh MW for the country, by adding 38,369 MW additional capacity to the existing 64000 (the original plan was to add 48000 MW in the VIII Plan but because of the resource crunch was cut down to 38,000 MW), nonconventional energy sources are to be maximised to produce an additional 3589 MW during the VIII Plan and over 5000 MW by the terminal year of the IX Plan. The government states that it is reviewing the natural gas utilisation policy in order to reduce sharply the wasteful flaring of associated gas.

Water

The government has requested the chairman of the Cauvery Water Disputes Tribunal the need to arrange for immediate release of water in the river through an interim order, so that urgent Kuruvai needs of the Thanjavur farmer can be met. In order to counter a possible delay on the Andhra side in the Telugu Ganga project, the Tamil Nadu government has decided to expedite the building of the new link canal from Poondi to Red Hills instead of relying on the existing flow channel from Poondi to Red Hills through the upper and lower channels via Tamarapakkam. The new 18 km link canal which was to be built later is being constructed now to make up for a possible delay in the project in AP and to ensure that Krishna water of 5 tmcft will reach Madras by 1993 and the remaining 7 tmcft 3 years later. The current south west monsoon has yielded significant inflows into the hydel reservoirs of the state. Since June 1 upto early July the inflow has been 209 MU compared to the last year's 61 MU with total storage being 840 MU against the full capacity of 2200 MU.

Transportation

On the railways front, the Tambaram-Chinglepattu Electric train services in both directions started in early July which will increase the traffic between the two places and increase the numbers who live out on that stretch and work in Madras. Similarly the railways announced that the Mass Rapid Transport System between Beach and Chepauk will be completed in 1991. Following the rather dubious proposal of the railway ministry to raise revenue by non conventional means — dubious because the first task should be to economise on its administration — the ministry has offered Rs. 400 crores for the early completion of the Tuticorin—Bangalore broad gauge conversion, if the government of Tamil Nadu and Karnataka agree to set up a corporate body to mobilise resource as was done to fund the Konkan railway. Here a means should be found to borrow funds from the banks for this purpose, with a firm programme to repay it from proceeds of the line. The Madurai broad gauge line in Erode, Dindigul and Karur will be ready by 1992 states the Railway manager. This will help expand the goods traffic. PTC reports a loss of Rs. 15 crores in 1989-90 compared to the previous loss of Rs. 5.8 crores. This loss is due to the government getting PTC to offer the public subsidised fares. Here if the passenger cars can be reduced, there is a case for subsidising bus service. But the amount of the subsidy and the amount to be paid by the lower middle class travellers will need to be determined. The southern regional office of the container corporation established at the start of the year in Madras has helped boost container traffic in the south and so swell both internal and foreign trade. On the latter the lines laid at Madras beach which lead directly to the port should reduce congestion and bottle necks at the harbour and allow easy flow of containers to and from the port. An ADB team of consultants are at work making a detailed study of the state's major roads with a view to drafting guidelines for their management and recommending the annual financial allocation. While on the latter the ADB team may bring some useful expertise, on management of the state's roads, the states engineers do not need any outside help which may only confuse the matter.

FP shops, the loan waiver and the Population Census

There are a number of complaints on the working of the fair price shops and so the government reports that it has taken steps to streamline its operation and improve its functioning. It says that stocks of commodities are adequate and available and their lack is one of the major complaint of users. In this connection the government states that it has a comfortable stock of rice of 6.5 lakh tonnes. A computer has been installed in the Food Department to collect and store information. It should be used to monitor the stocks in the districts and taluks and how they are being used. On debt relief, a meeting of the commercial and cooperative banks in mid July established steps to expedite the debt relief programme. The beneficiaries were identified before July 25 and using the lists so compiled and the Annavari certificate, the writing off of the loans is to be completed by the end of August. All those who have taken loans becoming due after October 2, 1989 and those not under the scheme have been advised to pay their dues promptly. How the banks and collector and other government officials are able to explain to the farmers that this is a one shot affair in discharge of the election pledge and therefore will not be repeated and the reaction of the farmers is not known. Prior to the country's population census for which preparations have started and the results of which will be known in February 1991 revealing a variety of demographic and socio economic trends, the Director of Census states that an expert committee on population projections has placed Tamil Nadu population in 1991 at 56.4 million against 48.4 million in 1981. If this 1.7 per cent growth rate is confirmed in the census next year, that will place Tamil Nadu at the top in population containment.

National

Plan

In July the work of the Planning Commission has concentrated on preparing for a meeting of the National Development Council on August 5 i) to decide on a revision of the Gadgil formula, on which state governments are being consulted on a proposal from its chairman that changes in the formula will be restricted to 90 per cent, leaving 10 per cent for the problem states which may face a serious reduction in their allotment. The 90 per cent comprises taking into account population (60 per cent), tax effort (10 per cent) and per capita income (20 per cent). On the basis of the results of the consultations in the state, a revised formula will be presented: and ii) to discuss agricultural policy on which a draft has been prepared and is still in the process of finalisation. It provides for an annual 4.5 per cent growth rate (against the 6 per cent proposed in the first draft) which will enable the country to reach a production of 240 million tonnes at the end of the IX Plan against the 1990-91 estimated of 173 million tonnes. This will call for an investment of Rs. 25,000 crores during the VIII Plan. Additional production will come from the eastern belt comprising East UP, Bihar, WB, Assam, Eastern MP and North eastern states. The emphasis is on diversified agricultural growth based on agro climatic planning involving large programmes of delivering water to the fields in the existing canals which the government places at 10 million hectares plus water shed development target of

an annual 4.5 million hectares, emphasis on tank irrigation and construction and renovation of traditional water harvesting structure. It proposes better quality agricultural input of seeds, fertilisers, and technology to be supplied to farmers along with intensification of shallow tube wells and extension of dry land farming. Subsidised fertilisers should be given to farmers, any cut in fertiliser subsidy being at the producer's end. Credit facilities for agriculturalists are to be multiplied and agro based industries in the rural sector established for job creation One worrisome fact is that the Planning Commission has not overtly dealt with how the NDC recommendation that the savings growth rate can be increased from 21 per cent now to 22 per cent in the VIII Plan. Actually the problem is more serious because i) CSO data shows that the savings rate in 1989-90 was 20.5 per cent and not 21 per cent, and ii) in the VII Plan the high industrial growth rate was obtained despite stagnant savings by increased international commercial borrowing. This the Approach Paper states will not be continued in the VIII Plan because it is dangerous to base the growth of the economy on contracted foreign debts. So the means of raising domestic savings must have priority from the Planning Commission.

Prices and anti-inflation measures

Inflation in June was a disturbing 1.6 per cent with the whole sale price index touching 177.5 on June 30. Inflation on a point to point basis over a 12 month period was 9 per cent. As usual the main price rises registered were in food articles, rice, jowar, arhar, barley, gram, fruits, vegetables, bajra, coffee, tea, fish, which rose by 1 per cent in just the last week of the month. During the year ended June 1990, 250 out of 447 commodities in the wholesale basket registered price rises, in the case of 80 of them by more than 10 per cent. In food articles prices of 16 commodities rose, while only those of 6 fell. The NDC meeting in August 5 is to discuss this disturbing inflationary situation. Government is trying to control the price rise. Ministries have been asked to cut their expenses by 10 per cent which may save Rs. 4000 — Rs. 5000 crores. But this across the board cut may hurt production and development. It should be discriminating, falling on non development areas. The government also believes that by keeping a tight leash on the deficit,— it states that the first quarter shows that the deficit is held at Rs. 7206 crores — and hopes to bring down the deficit from 9 per cent to 8 per cent by January. But this is difficult with the continuing devaluation of the rupee, adjustment in Procurement prices of cereals and the resulting rise in issue prices, regulation of imports of edible oils and other items of consumption which show price increases and the rising of petroleum prices and this upward reclassification of cities, HRA and CCA. The price situation is going to be difficult to control. With the good monsoon agricultural production should be plentiful and the increase in industrial production are moderating factors.

Stock Exchanges and state loans

The need to protect investors especially the small ones, from brokers, by insider trading, by failing to honour listing agreements is now generally accepted. For this, Stock Exchange authorities should be given adequate powers. In early July, speculative shares were roaring in the Bombay Stock Exchange despite the selling of shares by institutional investors. The

sustained boom has attracted small investors to enlarge their investments. The government made public in mid July its guidelines for valuing equity shares and for fixing premium when a company entered the capital market to raise capital through issue of equities. The guidelines are to help investors to arrive at a judgement on the "fair value" of shares. The RBI has, on the one hand, rejected proposals by the broker committee of the Bombay Stock Exchange to limit the operations of financial institutions, and on other hand finds its recent announcement allowing authorised dealers to borrow and lend in US dollars being misused both in the total amount allowed and its time period. But the liberal norms announced by it for the issue of commercial papers and certificates of deposits are attracting increasing number of investors to the short term money market. On the states loans, 13 state governments have announced the issue of loans totalling Rs. 1430 crores: they range from Rs. 275 crores for UP, Rs. 204 crores for Bihar, Rs. 143 crores for AP and Rs. 111 crores for Tamil Nadu to Rs. 32 crores for Haryana.

Economy

The most important event in July was the release of the World Bank's study, India, Poverty, Employment and Social Services which sets forth important data on poverty in the country. Using largely the Planning Commission's poverty line as the expenditure at which a minimum calorie intake and indefinable food purchases are issued at Rs. 49.09 per month for rural and Rs. 56.64 per month for urban areas in 1973-74 and using a deflator series developed by the Planning Commission and ISI, it arrives at the updated poverty lines of Rs. 55.2 for rural and Rs. 68.6 for urban areas in 1977-78 and Rs. 89 for rural and Rs. 111.2 for urban in 1983. It reckons the ultra poor poverty line as 75 per cent of the poverty line expenditure. On this base, the proportion of population living in poverty in rural areas declined from 53 per cent in 1970 to 44.9 per cent in 1983 and to 42 per cent in 1988—the absolute numbers were 237 million in 1970, 252 million in 1983 and 1988: in urban areas the decline was from 45.5per cent in 1970 to 36.4 per cent in 1983 and 33.6 per cent in 1988 — in absolute number 50.5 million, 64.6 million and 70.1 million. The overall percentage of the poor fell from 52.4 in 1970 to 40 in 1988 but increased in absolute numbers from 287 million to 322 million. The ultra poor were 30 per cent in 1970 declining to 19 per cent in 1988 (20.4 per cent rural and 15.8 per cent urban). In absolute numbers, the rural ultra poor were 134.6 million in 1970 declining to 123.6 million in 1988 but urban ultra poor increased from 28.4 million to 32.9 million. The regional concentration of poverty increased, with the share of the east and central regions at 54 per cent of the total population but increasing from 56 per cent to 60 per cent, the ultra poor increasing from 60 to 65 per cent. While in Bihar the number grew by a third, in the south (Kerala and Tamil Nadu) it fell by 4 million. The proportion of urban poor fell from 45.5 per cent in 1970 to 36.4 per cent in 1983 to 33.6 per cent in 1988, but in absolute terms, increased from 50.5 million in 1970 to 64.6 million in 1983 and 70.1 million in 1988. SC and ST were a third of the poor and 35 per cent of the ultra poor, persons in wage dependent families were 46 per cent of the poor in rural areas — over half in AP, Orissa and Maharastra, agricultural labour households had 64 per cent below the poverty

line in 1983 (over 70 per cent in Bihar & MP) and self employed households were 38 per cent of rural poor. This is a valuable piece of work which we have not done in India. There are some limitation such as the 1988 data being derived from the growth rate of various states, which themselves are not always comparable and assuming that growth is neutral as far as distribution is concerned. Here the NSS 42nd and 43rd rounds would have been more reliable. Further the price deflator introduces some distortions. The conclusion on Tamil Nadu having a decline in poverty is not supported by that state's data in absolute terms, and in any case while rural poverty in the state has declined, its, urban poverty has increased. The valuable data on the ultra poor, which we call the destitutes has not been fully pursued, particularly as the trend of decline in this was less than in overall poverty. But this study provides the Planning Commission and scholars in the country material on a comparative basis with other developing countries which can be improved as was done in the proposals to restructure the poverty alleviation programme in the 10 years. A second development was the NCAER review of the economy in 1989-90 in its June 1990 issue of its journal, Margin, which states that the average annual growth of National Income in the VII Plan was 5.3 per cent, like that of the VI Plan Due to marked fall in public sector savings the rate of gross domestic savings declined marginally. Agriculture did well with 172-173 million tonnes of foodgrains production (but short of the VII Plan target of 178-183 million tonnes), industrial production in 11 months grew by 6.5 per cent which was lower than the target of 8 per cent and the 1988-89 growth rate of 9.2 per cent due to slackening demand and shortage of raw materials — particularly in sugar, steel, cement, fertilisers and textiles' The price rise and the depletion of the foreign exchange reserve were matters of serious concern. Referring to the 1990-91 budget, it refers to finance minister's offer of a periodic review of the budget to check the deficit. Whether this would be through additional taxes or reduction of expenditures remains to be seen. If it is to be cut on expenditure, it should not continue the practice of the surplus on capital account financing the revenue account deficit. It should be by cutting back on the unbridled growth in revenue expenditure, where despite the record additional revenue mobilisation of Rs. 1595 crores, the revenue account deficit rises to Rs. 13,302 crores against Rs. 12,436 crores in 1989-90. A third issue in July was because of the resource, crunch decision of the government to give priority to externally funded projects in allocating central funds under which the country's priorities may not be followed. A fourth development was the ORG study on rural markets in 1984-89 which shows that rural demand for packaged consumer products rose from Rs. 733 crores in 1984 to Rs. 2083 crores in 1989, which means that the share of rural market in the total market rise from 28 to 37 per cent in that period. This is held to be a sign of poverty alleviation. Fifth, a FICCI study of the economy in 1989-90 states that industrial production grew by 6.8 per cent (it did not have the March figures of the jump of 19 per cent) and that the area of money supply and prices is a cause for concern. Sixth, an Export Import Bank study concludes that significant advantages have not accrued to the economy from the operation of foreign controlled enterprises — a conclusion that is important in light of the new investment policy opening the economy to such enterprises. Seventh, the government in the third week of July set up a national fund for afforestation and waste land development aimed at regenerating

the country's degraded land. Eighth, in July BICP released its study on the Food Corporation of India (FCI) exonerating it of the charges of over centralisation and high cost made by the Bhanu Pratap Singh Committee to be referred to later. BICP's conclusion is based on comparing FCI with the private organisations trading in foodgrains which does not tell the whole story as far as centralization is concerned. Finally, the government announced the setting up of 8 panels of secretaries to monitor the economy to ensure the execution of the government's election manifesto.

Agricultural policy

The Bhanu Pratap Singh Committee on agriculture (See Vol. XX pp. 166 & 264) submitted its report at the end of May and a summary of its findings and recommendations is as follows : Agriculture should be given the status of an industry if bias against it is not removed, but if it is given the same facilities as industry, agriculture need not be given that formal status: ii) agricultural growth rate be raised to 4.7 per cent to double its production in 15 years: iii) capital formation in agriculture should be raised from the present 10.2 per cent to 21.2 per cent in order to double its production : iv) the programme of action includes literacy promotion and improvement of quality of education in ural schools: v) area specific programmes should be taken up by the farmers in each block : vi) establishment of one model small farm in each village with a population of more than 500: vii) limiting the expenditure on major and minor irrigation works for the present in order to develop minor irrigation especially in eastern India and desilting of tanks to promote better storage and fish farming: viii) agrarian research and training to be increased ix) Krishi Vigyan Kendra to be established in each district by the end of Eighth Plan: x) mechanisation of small farmers to reduce their drudgery, xi) promote consolidation of holdings, xii) replacing the Food Corporation of India which can neither be improved nor its costs which increased over 4 fold in the 80s reduced by an alternative food security system which will reduce the costs of foodgrains distribution and keep effective interventionary power in the hands of the government in times of need which involve the following steps :

a) Withdraw all controls, except quality controls, on movement processing, marketing and export of farm products except in years of scarcity;

b) Announce parity prices for foodgrains which fully compensate the farmers for rise in cost of inputs and their other necessities of life, with reference to an agreed base year, and also set the limits between which the foodgrains trade will have to operate;

c) Establish a chain of rural godowns with warehousing facilities, one godown being located in a cluster of 10 to 12 villages, and the entire chain placed under the supervision and control of the Central Warehousing Corporation (CWC);

d) Make it obligatory on all stockists, who wish to stock more than 15 tonnes of foodgrains to do so only in godowns which are under the control of the Central Warehousing Corporation (CWC):

e) Make it known, that as soon as the price of the foodgrains in the open market would rise above the intervention price, already fixed, all stocks would stand transferred to the government, which would acquire the whole or part of it, on payment of 'parity' price plus storage charges; and

f) In the event of market price exceeding the intervention price, the State shall have the right to acquire all stocks; wherever located and to whomsoever those may belong, at 'parity' price, leaving with stockist quantity required for his private consumption and agricultural needs, if he is a farmer;

g) The farmers should also be helped and encouraged to set up cooperative shops in cities to sell their produce directly to consumers so long as they do not transgress the intervention prices. xiii) to expand farm exports which have a vast untapped potential rapidly, a new department of farm exports be set up in the union ministry to promote leadership, data base and planning, and also a cell in the new department to monitor demand and supply of farm products in India and abroad and to keep farmers informed about Indian and foreign market conditions: xiv) special thrust to brackish water, prawn farming, Basumati rice and quality control for exports and xv) need based credit requirements of the farming sector on the basis of recommendations of a committee of experts to be set up and xiv) need based credit requirements of the farming sector should be set up.

Industry

In July there were four major developments in the industry area. First, the new industrial policy elaborated in the last issue of the Bulletin was reviewed by the cabinet and approved. The textile machinery manufacturers have urgently appealed to the government calling its atteention to the fact that many textile mills belonging to NTC and others in the private sector are now importing their machinery to take advantage of the concessional duty of 25 per cent instead of the normal 80 per cent which makes it cheaper than Indian machinery, and have asked that purchase of indigenous machines be given a similar 30 per cent price subsidy. Whether or not this development which was foreseen by the Bulletin in its comments on the new policy in the last issue, in order to save on the outgo of foreign exchange and to restruct what it calls unnecessary imports, the government announced on July 20 three restrictions in the new import policy: 1) a 15 per cent cut in the free foreign exchange allocation for the import of raw material and component in the automobile, electronics and household consumer durables sector on which Rs. 4786 crores were spent in 1989-90, thus saving Rs. 700 crores in a full year: 2) 37 capital goods have been removed from OGL and shifted to the licensed category. Since last year Rs. 550 crores were spent on overall capital goods imports, the saving here will be Rs. 500 crores: 3) the new facility of deemed export benefits to indigenous producers of capital goods who supply machinery against the concessional import duty and the inducement to importers to use more of the Rep and other licenses to import capital goods will also save foreign exchange. In addition the commerce ministry's foreign establishment have been reduced from 39 to 16 and staff from 109 to 56. This too was continuously recommended by the Bulletin in regard to the level on the export subsidy, as these offices made no real contribution to our exports. This will result in saving Rs. 7 crores to Rs. 14.5 crores. This is only the start of modifications of the new industrial policy which are being forced on the government by the lack of foreign exchange resources. Second, as promised in the new industrial policy, the government announced on July 20 a list of 27 industries which will be exempt

from MRTP clearance under provisions of section 21 and 22 of the MRTP Act. They deal with expansion or setting up of new industries by them. The third development was in regard to sick units involving a) the request by BIFR to change in definition and giving it powers to decide the question of relief and concessions, b) workers in 3 closed textile mills in Maharashtra have put forward a proposal to BIFR to take over these units and the setting up of a Rs. 10 crore Fund by IDBI for such sick companies to be taken over by the workers and c) the turning down by RBI of the proposal by BIFR for a single window scheme, which however is a wrong decision and should be reviewed and reversed. Fourth, the government also published in July a negative list of banned items which the small scale sector cannot enter. The aim here is that the concessions and subsidies made available to the sector are used cost effectively and to preserve foreign exchange. Fifth, the government while continuing the licensing of sugar mills for a minimum economic size of 2500 tonnes, has in its fresh guidelines stated that the new sugar foctories and expansion of existing ones during the VIII Plan will have no maximum limit to their capacity. How this provision will work remains to be seen. Finally the government reports that it is continuing to consider how the vast and increasing amount of black money can be used productively. Demonetisation for the moment is out because of the structure of the currency. Housing is for the moment the major sector on which the use of black money is being explored.

Public Sector Enterprises

The Bureau of Public Enterprises (BPE) has developed a comprehensive formula for identifying which of the 100 public sector sick units with an annual financial loss of Rs. 1900 crores should be closed and which should be revived and rehabilitated. The Bureau has identified 45 terminally sick units, which are not of high social priority and which operate in highly competitive markets, for closure. These are units which have wiped out their capital and have incurred losses for 5 consecutive years. It proposes that these units be referred to BIFR, which would be the first time that the public sector enterprises come under its discipline, as so far only the private sector units have. The Department of Heavy Industry reports that 33 of its manufacturing undertakings have equalled or exceeded their targets for the first quarter of 1990-91, with a total production of Rs. 1342.88 crores led by Bharat Wagons, Jessop and Richard and Cruddas. The Bureau also reports that the concept of the memorandum of understanding is to be selectively modified and be replaced by a form of contract between the government and the unit. The Bharat Business International Limited (BBIL) will be the first unit to have a 3 year contract with the government instead of the present 1 year memorandum of understanding (MOU). Once this contract is signed between BBIL and the government, the MOUs of MMTC and STC will be scrapped. Instead they will present to the holding company BBIL, 3 year rolling plans.

National Production Front

Steel

In July the government finally decided on the role of the private sector for doubling steel output in the VIII Plan. The mini steel plants are now to be

allowed a capacity of one million tonnes against until the recent 2.5 lakh tonnes. The reason for this breaking of the monopoly of the integrated steel plants in the public sector is because the demand for steel will increase from 14.80 million tonnes in 1989-90 to 22 million tonnes at the end of the VIII Plan in 1994-95. The SAIL plants, TISCO and Rashtriya Ispat Nigam will be raising their share by only 5 million tonnes by that time in 1994-95 and even this is on the asumption hat SAIL plants will complete their modernisation programmes and the Vishakapatnam plant will be functioning at full capacity. Even in 1989-90 there was a shortage of 1.35 million tonnes of steel, which will rise to 5 million tonnes in 1994-95. So the government has stated that steel plants having a capacity upto 1 million tonnes could be brought into being if suitable technology is adopted and energy optimisation ensured. It has been made clear that existing and new units cannot expect any increase in power supply from the grid and so must each have their captive power plants based on coal. The doubling of the steel output in the VIII plan is possible as the capacity for sponge iron will be rising fast and large sized steel plants based on gas or electricity can be located by the private corporate sector in different regions. But the whole plan and programme to bring in the private sector in a massive way depends on the availability of power for the private sector. Even now because of lack of power, the mini steel plants with a capacity of 5.65 million tonnes are producing in 1989-90 only 3 million tonnes (53 per cent of their capacity). There has been an increase in the output of mini steel plants in the last 3 years because of power shortage and/or lack of scrap. With an improvement in sponge iron supplies, melting scrap imports can be stopped. But the increase in steel output planned demands adequate power and a coordinated pattern of production to produce the steel in demand, which can stop the import of Rs. 2000 crores of steel last year, and which can rise to Rs. 6000 crores by 1994-95 unless the public sector plants improve their efficiency and the private sector units optimise their capacity and output with adequate availability of power. SAIL reports that its 5 integrated plants — Bihar, Durgapur, Rourkela, Bokaro and Burnpur increased their crude steel production by 6 per cent and saleable steels by 2 per cent during the first quarter of 1990-91. This is a poor start which needs to be improved speedily.

Crude

On the production side, OIL reports discovery of a high yielding (55,000 cubic metres a day) natural gas structure in Dandewala in Rajasthan. This adds to the 27 million cubic metres of gas now in use which government states saves the country Rs. 1845 crores in replacement of imported petroleum products. But this is still only the tip of the iceberg as still vast quantities of associated gas are still being flowed and the potential of gas by 1994-95 is 98 million cubic metres of gas per day. On the petroleum consumption side, it is reported that the South led by AP and Tamil Nadu increased their consumption of petrol by 14 per cent, of diesel by 10 per cent and kerosene oil by 10 per cent in 1989-90 over the previous year. Retail consumption has shot up by 13 per cent for petrol and 9 per cent for diesel, while bulk consumers increase has halved. The State Transport undertakings are the largest diesel consumers with a share

of 46.5 per cent followed by the railways at 21 per cent. It is also reported that the July experience of a weekly half holiday (on Sunday instead of being closed all day, the retail outlets are open half a day) and the restricted hours of work of fuel pumps have not brought about a decline in consumption. Rather the effort on fuel conservation which in particular the Petroleum Conservation Research Association is propagating has some effect. It is now propagating the use of Nutan Kerosene stove designed by OIL's R & D Centre at Faridabad. These stoves save 30 per cent kerosene and work 25 per cent faster than ordinary wick stoves. In addition it is indicating how buses can save diesel consumption through reduced speed and how by changing the footvalve the million agricultural pump sets can reduce their diesel consumption by 30 per cent.

Non ferrous

Hindustan Zinc in the first quarter of this year reports exceeding the target by 123 per cent, producing 16073 tonnes of zinc due to increased productivity and further use of its equipment. Further its lead and zinc concentrate production from its mines in various states has also increased by 4 per cent to 47,488 tonnes. Altogether in its production, sales and the pre tax net profit of Rs. 18 crores earned for the first quarter it is setting a necessary and good example to other non ferrous enterprises.

Agricultural Production

The performance of the South West monsoon in July wherein of the 35 meteorological subdivisions, 11 had excess rainfall, 20 had normal rainfall while 4 had deficiency — of which Andaman and Nicobar islands is not an agricultural area and Tamil Nadu is dependent more on the North East monsoon, so that only the deficient rainfall in Gujarat and North Maharashtra is a cause for concern. The kharif sowing is underway and if the rain continues on this good start in July through August and September and a good hath is rain in September end and early October, the kharif harvest could be 100 million tonnes, it is expected. Of the 31 subdivisions that have recorded normal or excessive rains so far, a majority of them grow kharif crops on a large scale—like paddy, oil seeds and cotton. The sowing phase is still on in the northern region. Apart from paddy, other crops like coarse grains, pulses, jute will be grown on a large scale because of plentiful rains. The government's machinery is making available for the kharif campaign timely and adequate inputs of fertilisers, seeds, credit to farmers. To further support this, the procurement and minimum support/procurement prices of kharif crops were raised by mid June, as reported in the last issue of the Bulletin. For 1990-91 the foodgrains targets has been fixed at 176.5 million tonnes—(rise 73.5 million tonnes, wheat 54.5 million tonnes) oil seeds at 18 million tonnes, cotton at 11.5 million bales, jute and mesa at 9 million bales and sugarcane at 220 million. In 1989-90 the output is estimated at 173 million tonnes, against a target of 175 million : hence the 1990-91 target is modest and is within reach. The other major event in July was the making public of the report of the Expert (Hanumantha Rao) Committee (see Vol. XX p264) for review of methodology of computing the cost of production of the crops, on the valuation of labour and management as an item of cost, which was submitted to the government in March and released by it in July together

with its decisions on it. The government accepts the recommendation of the committee that the escalation of the procurement or minimum support prices should take into account rise in input costs between the submission of the Commision for Agricultural Costs and Prices and the arrival of the produce on the market to compensate the farmer for the observed increased cost of inputs during the growing season. The government, however, has not accepted the further recommendation of the committee of taking the actual market wages for valuation because of the wide variation between market wages and statutory minimum wages. The committee also pointed out that if statutory minimum wages are used as the basis, it would favour farmers and regions which do not follow the statutory wage and set up a competition between states to jack up the minimum wage to get a higher price for its output, as has happened in Orissa where against the actual wages paid of Rs. 11 the government has increased the minimum wage to Rs. 25 per day. The government in rejecting this recommendation of the committee has stated that as the differential between the statutory minimum wages and the market wages is due to the infrequent revision of the minimum wages and laxity in its implementation, this difference can be done away with by ensuring regular revision of the wage and providing the necessary infrastructure for effective implementation. So the government has decided that the valuation of labour should be the statutory minimum wage or the actual rate, whichever is higher. The government has also not accepted the committee's recommendation that the actual paid out cost for managerial — entrepreneural function should be the item of cost included and instead has fixed a higher 10 per cent of the total cost of production of the crops for this item. The committee has also recommended doing away with the practice of valuing family labour on the basis of the wage of the attached labour and has instead suggested using the actual wages rates for casual labour. It is regretted that the government has not accepted the recommendation of the expert committee it has appointed on these technical issues. Third, the government announced the second enhanced suppy price for rabi wheat at Rs. 225 a quintal. Fourth, the work on the draft farm policy as a means of increasing the per capita income of the farmer and reviving the rural economy is still under preparation as was analysed earlier, under the economy sector. Fifth, the government announces that the delayed national seeds project III is to start at the end of July and is aimed to help attain the food grain target of 1990-91. Sixth, the government announces that it has incurred a loss of 521.8 crores during the VII Plan on the crop insurence scheme mainly because of the drought year 1987-88. But even so the scheme has to be extended as a means of protecting the farmer, as the scheme covers only 10 per ccnt of the area under cultivation.

Foreign Trade

The foteign trade scene is not bright in July. The trade deficit for April and May is reported to have risen by 18 per cent (Rs. 170.5 crores to Rs. 1124.28 crores). The 3 cuts in liberalised imports of machinery and components and foreign exchange allocation were earlier referred to. In July, the ministry of commerce states that export preformance in the first 3 months of the current year 1990-91 was so poor that the year's target of

Rs. 36,000 crores may not be reached. The minislry, however, announced raising the target for engineering exports from Rs. 3100 crores to Rs. 3403 crores. The ministry also referred to the disturbing trend of importers of Indian goods complaining about its poor quality and its not matching the quality of the samples shown to them before the orders were placed. Even more disturbing are the results of a corporate trend survey by PTI which finds that a majority of front line export houses are not important foreign exchange earners, that 75 per cent of the 1458 private corporate companies which make up the Federation of Indian Exports Organisation (FIEO) (that is 1085 companies) accounted for less than 30 per cent of FIEO export and only 15.5 per cent of all exports. While the per unit exports of the top 353 exporters rose steadily (from Rs. 17.3 crores in 1986-87 to Rs. 24.3 crores in 1988-89 and Rs. 29.7 crores in 1989-90), the bottom 1085 exporters had a meagre Rs. 2.4 crore export per unit in 1986-87 rising to a meagre Rs. 3.4 crores in 1989-90. Even with the top 353 exports, only 7 export between Rs. 100-300 crores (vide the "Star Export Houses" proposed in the 3 year Import-Export policy), 19 companies between Rs. 50-100 crores and 186 companies (over 52 per cent) less than Rs. 15 crores. The government also reports that counter trade as a proportion of total trade turnover is increasing annually by 10 per cent. 31 per cent of the trade involves agriculture, forestry and food products, 15 per cent ores and minerals, 13 per cent vehicles and transport equipment and 16 per cent manufactures. The problem here is that much of these exports from India are reexported to the free currency areas. Subject to agreement on the rupee rouble exchange rates, the government announces that the Rupee trade with USSR is extended for a further period of 5 years. In July the government was studying the problem of the depleting foreign exchange reserves which has resulted in the 3 year import export policy earlier referred to, the 20 per cent cut in the foreign trade budget of ministries, the 10 per cent reduction of the foreign exchange expenditures requested by the ministry of external affairs and the decision to allocate central resources first to externally aided projects-which is to be regretted as it may distort the plan priorities. In addition to this last decision aimed a quicker utilisation of foreign aid, the government is also being pressed to further ease the entry of foreign investment as one means of reducing the balance of payments gap on current account. Thus the economy is facing several and contrary pressures. Also the finance ministry has given a time limit of 6 months to exporters to bring into the country their sale proceeds in order to be eligible for income tax exemption. On individual commodities, in view of the record sugar production of 10.9 million tonnes, the government is thinking of export of sugar. Indian silk exports are reported to have earned Rs. 400.61 crores in 1989-90 and Rs. 57.20 crores in first two monts of 1990-91. Leather garment exports increased by over 100 per cent to Rs. 322.88 crores in 1989-90, the total export earning of leather goods for that year being Rs. 2030.04 crores. Exports of automotive components double to Rs. 110 crores in 1989-90 and is set to increase further in 1990-91. Garment in the first 6 months of 1990-91 earned Rs. 2300 crores so that it will exceed the year's target of Rs. 3900 crores. Marine and agro based products exports are rising fast and will reach this year's target of Rs. 4160 crores.

Aid and Loans

The World Bank is giving a loan of $25 million for executing the Northern Regional transmission system. IFC announces raising its loans to India in 1991 to 147 million, for power and small and medium industries. The Asian Development Bank approved in July a loan of Rs. 200 crores for modernisation of Indian ports, its loan the North Madras thermal plant was earlier referred and it has expressed interest in a loan towards the Rs. 2000 crores, Konkan railway project. The Federal Republic of Germany is making a loan of Rs. 569 crores for irrigation, water shed development, non conventional energy development and to finance German imports. Japan is making a grant of 1.2 billion yen (around Rs. 13.4 crores) for ground water exploitation, improvement of fire fighting equipment and debt relief. EEC is making a grant of Rs. 9 crores for a water shed management project in UP. The World Bank's 1989-90 World Debt table calls attention to the worsening position of India's foreign indebtedness- at $69,783 billion in 1990, to 77,428 billion in 1991 compared to $62.348 billion in 1989 and $54.94 billion in 1988. Long term debts is rising from $58.327 billion in 1989 to $65.5 billion in 1990 and $71.87 billion in 1991. So the debt service ratio has risen from 15 per cent in 1984 to 22.9 per cent in 1988 to 24 per cent in 1989 and 26.8 per cent in 1990 and 26.3 per cent in 1991. But this decline in 1989 is cancelled when the ratio of total external debt to GNP is taken into account which rises from 15.3 per cent in 1984, to 20.7 per cent in 1988, 26.8 per cent in 1990 and 28.9 per cent in 1991. Interest payments are soaring from $134 billion in 1988 to $4039 in 1990 and $4617 billion in 1991. If NRIs deposits and suppliers credits are taken into account, the data provided to parliament by the Finance Minister of Rs. 100,000 crore as our foreign debt is correct. IFCI has been authorised to raise $100 million loan from a consortium of foreign banks.

International

World Economy, World Poverty and World Trade

UN's World Economic Survey 1990 reports that the growth of the world economy was 4.4 per cent in 1988 and slowed to 3.1 per cent in 1989 and will further decline in 1990. It says that the economy of the industrialised market economy which grew by 4.4 per cent in in 1988 slowed to 3.5 per cent 1989 but will be on a steady growth path from now on— as the OECD also forecasts. It warns against rapid inflation especially in Eastern Europe. Developing countries as a group experienced a sharp slow down in economic growth from 4.5 per cent in 1988 to 3.4 per cent in 1989. It reports that developing countries as a whole made a transfer of $32 billion to the industrial countries, thus slowing their economic growth. This outflow of $7 billion was more than in 1987. In particular Latin America had a net outflow of $28 billion in 1989 up from $2/ billion in 1988, which means $28 billion of its savings were not available for domestic investment. It states that the Brady plan on third world debt reduction is not providing debtor countries with enough relief in their net transfer of resources to take them out of debt trap. The extent of Official Development Assistance is difficult to assess it states because this depends on the level of economic growth of industrialised countries and the extent of redirection of resources to Eastern Europe. The World Bank's

World Development Report 1990 deals with world poverty, points to urgency of this terrible problem, with world poverty, with little hope of anything important or effective emerging. The report calls on the richer countries to "supply substantial volumes of aid to countries that are seirous about reducing poverty." The report gives details on poverty in different countries and regions including India and on the various poverty alleviation measurers. The report pays attention to the direct investment in generating employment, in education, housing for the poor, health care as means of alleviating poverty. It imples that industrialisation in the developing world did not proceed smoothly and had to be halted because of the growing constraints on resources, poor, half hearted technology transfers, so that the benefits of industrialisation were not adequate to alleviate poverty and brought about the squalor and insanitary conditions in which the poor live and the extensive damage to environment. The rapid growth in numbers of the urban and rural poor and their vulnerability to disease have made it imperative for governments to make massive investment in social welfare schemes. The report records some of the most important of such increases. But here again the resources crunch has slowed this poverty alleviation programme. The World Bank report holds out hopes of the investments on welfare schemes and increase in agriculture, but this needs to be supplied by the industrialised countries who are making available only 0.3 per cent of their GNP as official assistance which is 1.4 per cent of their governmental expenditures. The report makes the plea to step up the aid flow from the current $51 billion to $144 billion by 2000. On world trade, IMF reports that world trade slowed by 8.6 per cent in 1989 after increasing by 15 per cent in 1988 and 19 per cent in 1987, due to the fall in volume growth rates from 9 per cent in 1988 to 7 per cant in 1989. This developments reflected the effects of the slower growth of the world economy earlier referred to, the recovery in oil prices and stagnation in non oil prices. For the developing countries exports rose by 12 per cent to $87 billion and imports by 10 per cent to $70 billion and raising the combined trade surplus of developing countries. Asian trade rose fast, while industrial countries exports rose at 17 per cent.

IMF

IMF announced in July that its Board of Directors has approved a 50 per cent increase in its lending from $120 billion to $180 billion. It also states that it is serving to improve the design of its programme to ensure a better blend of adjustment, growth and equity, which may meet the strong criticism of the countries which have suffered from its policy of adjustment.

GATT

As GATT's Uruguay round comes to its closing stages, the draft agreement being worked out between the negotiating countries in Geneva in July will be submitted to the ministerial meeting in Brussels in December 1990 for the final approval. As matters now stand, the industrialised countries have achieved their objective of increasing their control over world trade flows, while the developing centres are still in disarray, trying desperately to present a united front. The industrialised countries have succeeded including new areas such as trade in services

foreign investment and intellectual property rights under the frame work of GATT, which will give them unprecedented rights to step in or select technology to third world countries. The developing countries inspite of various attempts (see Vol XX p 12) have still to agree on their stand on these crucial issues. There was no use their boycotting the negotiations as they did in the Tokyo Round, where all the concessions wanted by the industrial countries were incorporated in the final act and the developing countries had to comply with these provisions by lowering their tariffs. From the ontset the industrial countries had one major aim to include under GATT all the sectors in which they still enjoy a comparative advantage. The result is that the developing countries like India have to throw open their markets over a period of time in areas like banking, insurance and consultancy services. This not only implies exposing their industry to the vicissitudes of foreign competition, the country's basic economic policy will have to change. Similarly the inclusion of foreign investment will involve countries having to amend their laws to permit free entry of MNCs. Similarly by bringing property rights under GATT, countries like India will have to amend their patent laws. As for safeguards, the GATT clauses which permit an importer to impose tariff restriction, in areas where it fears a threat to domestic industry, the industrial countries are planning to push through a system which will allow selective imposition of such barriers as against the present system which allows only non discriminatory negotiations. This issue was highlighted by the US effort to submit GATT by invoking super 301 legislation, to which India has stood up. The developing countries have been demanding unrestricted trade in tropical products and have tried for over 2 decades to put it on the GATT agenda, but industrial countries refuse to lower their tariff barriers without a reciprocal cut in tariffs by the developing countries. There is a similar deadlock over the failure of the Multi Fibre Arrangement (MFA) on which there was one hope of settlement as indicated in the last issue of the Bulletin; the deadlock caused by the US and Canada demanding global quotas to replace MFA and the developing countries, EEC and Japan opposing it and wanting to introduce safeguards procedures on MFA lines means that MFA which was originally devised as a temporary concession to the industrialised countries now is being used by them as a powerful bargaining tool—for opening the economies of developing countries to foreign investment and the reducing of tariffs on a purely reciprocal basis. Now given the rising tide of Protectionism in the Industrialised world, GATT's very existence is threatened and as the US Super 301 and Special 301 show there is strong pressure to replace GATT by bilateral negotiations. in this context the secretarial of GATT have put forward a draft report to set up a new multilateral trade organisation in place of GATT called Multilateral Trade Organisation (MTO) which would give it the authority to enforce regulations of the multilateral free trading system. This is desirable but the industrial countries will oppose it as it threatens their dominance.

World Environment Fund and the Montreal Agreement

In the June meeting in London the signatories of the Montreal protocol which aims at controlling ozone depleting chemicals, made radical changes in the

1987 act to make it both effective and fair to the developing countries. The main changes are: 1) All CFC's man-made chemicals, and not only a select few as in the original act are included: 2) HCFC which was excluded is now included and is to be phased out by 2000: 3) A 100 per cent reduction in the consumption of controlled substances and not a 50 per cent reduction as in the previous act: 4) Phasing out of Halens instead of a freeze on its production: 5) Exports to non and members banned from 1 January 1992 instead being discouraged: 6) Export of technology for manufacture controlled substances to non parties banned and not only discouraged: 7) Both developing and developed countries can export to non parties upto January 1992 instead allowing only developed countries to do so. Having fought successfully to amend the Act, India should intensify its R & D effort to see how effectively HCFC-22 can be adopted to industrial consumer needs of the country—in regard to refreigerators, air conditioners, compressors where our R&D should help develop subsitute chemicals to CFC and at that time sign the protocol. The Ministers of 56 countries at the meeting also approved the worlds' first global environment fund. Now it should be implemented with World Bank help.

ILO study on the Ageing at work

An ILO study of people over 65 years says that economic necessity makes it impossible for them to retire and may continue to work till they die or are incapable. The ILO study which covers 151 countries states that in industrial countries with good social security system few persons above 65 want to or are forced to work. In Latin America which has the high proportion — going upto 80 per cent in Eucador and Dominican republic, in Asia an increasing number— in China 34 per cent, in India and Pakistan 57 per cent, in Africa between 74 to 91 per cent of people over 65 years are at work. The study found that the larger the number of the aging people, the lower the proportion of the older persons remaining in the labour force, and the more there is urbanisation, the lower is the labour force participation rate of the older people. These are familiar to most of us, but this is the first time that the issue has been quantified.

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II. Agricultural Development in Tamil Nadu

Paddy and other crops

In the districts which have received rains from the south west monsoon, the farmers have begun ploughing and preparing the field for the Kuruvai/first crop of the year. In the last crop season of 1989-90 they have succeeded in exceeding the target of rice production of 60 lakh tonnes at 62 lakh tonnes. This was despite the smaller area for farming because of the deficient monsoon and the late opening of the Mettur waters, so that only about 18-20 lakh hectares instead of 24 lakh hectares were available for growing paddy by them. Also the farmers have diversified their cropping pattern, in some areas replacing paddy by sugarcane.

Also as noted in the last issue, the farmer was able to so use his inputs and manage the farming cycle that he was able to increase per hectare paddy production by 100kg. Now with an average yield of 3100 kg of rice per hectare, he is on a par with the Punjab farmer, who holds the record in the country for per hectare yield of paddy. In some remote areas, this resulted in a fall in paddy prices because of the large stocks which came into the mandis and this affected the farmers adversely. The North East moonsoon which failed him by 25 per cent was to some extent made up by the unseasonal January rains. The farmers were also helped by the union government's special foodgrains production programme which should be continued this year, and not cut back as the farmers are awaiting this subsidy. Otherwise the farmer will feel that he is being penalised for the successful work put in by him in the last season. The state government also is looking at this seasons effort by the farmer with hope and anxiety because it knows that the state's paddy production has to increase by 20 lakh tonnes to 80 lakh tonnes by the terminal year of the IX Plan.

Research results

In July the research reports are from Department of Agronomy, Annamalai University on seed pelleting as a techniqe of seed encapsulation with organic, inorganic nutrients, water absorbants and pesticides for direct sown dry land farming of paddy, wheat, pulses and oil seeds, from the Agricultural College, Madurai on the means of combatting heavy metal toxity in soils growing dryland pulses, from the UAS Dharwad on techniques to control leaf rust in wheat growing tracts, from TNAU on improving nitrogen use efficiency, from the agricultural research station, Bhavanisagar on the results of its successful experiments in detecting seed microflora, from IARI, Delhi on the growing of tuberose in the plains, from the research station Kodaikanal on growing high yielding carrot varieties at high altitudes, from UAS Dharwad on combatting pests which attack chillis, from AP Agricultural University, Ponneri on eradicating wilt diseases of beetlevine, from the indian cardamom research institute, Myladumper on controlling grubs menace in cardamom, from the national pulses research centre, Vamban on the prohylactic measures to be taken to avoid/control the stem borer pest in cashew, from the agricultural research station, Bhavanisagar on controlling the scales attack on the rose flower, from the soil salinity research centre, Tiruchi, on the results of the tests on the magnesium required in sodic soils, from TNAU station, Paiyur on techniques used in avoiding downy mildew in grapes and its flowers, from the coconut research station Veppamculum on means of checking black beetle in coconut, from the regional research station, Vridachalam on white fly control in cotton, from UAS, Bangalore on the result of soyabean inter cropping in sugarcane, from agricultural research station, Bhavanisagar on ground beetles as useful predators in controlling various crop pests, from TNAU on the ideal crop, Roshata for green manuring, from Kodaikanal research station on the growing of polar beans, from Kerala Agricultural University, Trichur on the balanced fertilisers to be used in coconuts, from the Veterinary College, Thrissoor on means of curing herpes infection in cattle, and means of avoiding viral infection in cattle and from the SV university, Tirupathi on the effects and fixation of non protein

nitrogen in fish varieties which suggests that urea fertilisers in paddy cum field yields should be minimised as much as possible.

Animal husbandary and dairy farming

The Rs. 31.1 crores cattle development project in the state, with the help of World Bank funds has as its primary objective establishing a sustainable livestock production system in the state. This is part of the state governments strategy to increase milk production in an environmentally stable condition. The strategy includes a) strengthening the infrastructure at frozen semen bank and livestock farm at Hosur, Eachenkottai and Orathamad for increased production of frozen semen and undertaking production of crossbred bulls, b) establishing frozen semen depots in 10 locations to procure and distribute frozen semen and liquid nitrogen to all Artificial Insemination centres using frozen semen, and c) expansion of command area of frozen semen. Other areas include a fodder development programme involving production of seeds of fodder grass and fodder tree production of seedlings for distribution to breeders, undertaking veterinary epidemiology survey and disease surveillance at the state level and in service training for the Animal Husbandry staff. In 1990-91, the first year of the project will be devoted to civil construction, equipment purchase and in service training, development of extension work on this basis, intensified work will start in 1990. There is also need to develop effective milk marketing outlets, as shown by the North Arcot and Salem districts which have crossed 2 lakh litres in procurement during the flush season every year. There is a demand for processing the milk and establish outlets for disposing the surplus.

Fishery

The state government has allocated 2000 acres of land on lease for development of prawn culture, as part of the 5000 acres earmarked for the purpose during the year. This has now become possible because the government has decided to lease out the land. This is important because fish production in the state has fallen to 2.75 lakh tonnes in 1989-90 from 3.50 lakh tonnes in 1987-88. And to restore fish production, not only is acqua culture being developed, the infrastructure, fishing harbours and jetties and making available to fishermen mechanised boats and catamarans are underway to be completed by 1992-93.

Tea

Tea has had a very good year in 1989 characterised by an unprecedented price booming to a drop in production and lower domestic consumption and record export earning. The generally favourable climate in 1990 has raised hopes for the year's production at 720 to 740 million kg, which is encouraging, except that the original target for the terminal year of the VII Plan, 1989-90 was 700 million kg. There are several problems faced by the industry. Over the past 30 years tea production has been rising by an annual 2.5 per cent, while consumption has been growing at 4.5 per cent per annum. Overaged tea gardens, of 4 lakh hectares of plantation in the country 44 per cent is over 50 years old, average production per hectare is a low 495 kg in Darjeeling while it is 2600 kg in Coimbatore, with the national average being 1700 kg. So the need for finding new non traditional areas for the gardens, renewing and rejuvenating the overaged plantation and boosting productivity is urgent. On the export side, tea exports were 223 million kg in 1989,

leading to a cut in domestic retention because of the declining production. There is need to maintain exports at a steady non fluctuating level of 220-240 million kg and to diversify our customers as 70 per cent of exports are to the USSR, UK and Iran. There should be a wider spread to over 20 countries. Finally there is need to improve the quality of tea for which R & D by UPASI and CSIR should be stimulated.

Coffee

Coffee production in 1989-90 rose to 1.33 lakh tonnes from 98,000 tonnes in 1988-89 and coffee exports were also above 1 lakh tonnes in 1989-90. But with the crash of coffee prices in the world market, the coffee production has had to face the loss of falling prices from Rs. 34,000 per tonne to Rs. 27,000 per tonne. The pressure to export in 1990-91 will be even greater with the production expected to touch 2.2 lakh tonnes. There is also a forecast that the productivity may be lower at 1.86 lakh tonnes. The demand of the coffee industry for a new approach to coffee marketing is justified. There is one major remedy to safeguard the coffee grower's income and that is to expand the domestic demand and market for coffee. This is what the Latin American countries like Colombia, Brazil have done to counter the effect of the international fall in coffee prices on their grower. The domestic market must break out of the current stagnation of consuming 55,000 to 60,000 tonnes, which makes no sense when the world market is no longer attractive, particularly to the Robusta Coffee growers whose price has fallen sharply. Is the stagnant domestic market also encouraged by the pooled marketing system which does not allow for competition and resultant efforts to expand the market?

Rubber

With the onset of the lean season, the struggle between the Rubber Board and the All India Rubber Industries Association (AIRA) is on. On the one hand, the Rubber Board estimates production will increase from 481,000 tonnes in 1994-95 to 690,000 tonnes in 2000 from the 1989-90's 297,3000 tonnes grown on 4.40 lakh hectares to which 80,000 hectares are to be added in the VIII Plan. It estimates consumption of natural and synthetic rubber at 6.51 lakh tonnes in 1994-95 and 8.12 lakh tonnes in 2000, so that natural rubber production will be adequate to meet the demand and there need be no exports. On the other hand AIRA states that because of the shortage of natural rubber, prices have shot up, the rubber buffer stock scheme has had to be shelved and imports inadequate. It proposes that users should be allowed to import rubber on the basis of certified consumption of each rubber manufacturer, that the users will be paying an import duty upto 25 per cent to protect the interest of growers, and that the buffer stock should be equivalent to 3 months average consumption. In the midst of this dramatically opposed view points, the data from official sources show for 1989-90 (in tonnes) opening stock at 69279, production 297,000 consumption 342,000, stock requirement 85,500, actual Stock 66,250, deficit 61,221, actual import 41,970, uncovered deficit 19,257 and average price in India Rs. 2131 and in Malaysia Rs. 1550. This situation is likely to continue in the VIII Plan which will show increase in production due to higher productivity, using high yielding seedlings, and extension of hectarage which could result in an additional production of 1,20,000 tonnes, while consumption

will be over 8.2 lakh tonnes, showing a deficit of 40,000 - 50,000 tonnes which will have to be imported unless more synthetic rubber is used.

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III. Industrial Production in Tamil Nadu

Bank credit for 1990-91

Banks in the state under their Annual credit Plan published in July propose to provide Rs. 1845.51 crores as credit to the state's priority sector in 1990-91. For the 20 districts, that is a 16 per cent increase over the target of Rs. 1591.76 crores for 1989-90 and over a Rs. 1000 crore over the estimated actuals of Rs. 1717.38 crores. Agriculture and allied activities will get Rs. 1236.31 crores (67 per cent) followed by the services sector Rs. 311.95 crores (17 per cent) and the industries sector Rs. 297.35 crores (16 per cent). Within agriculture, Rs. 830 crores will go as crop loans, Rs. 214.45 crores as term loans, Rs. 1297.24 crores as loans to rural artisans, cottage industries and SSI. The leading districts who get two thirds of the credit are Chengai-Anna, South Arcot, Salem, *Periyar, Madurai,* Coimbatore, Tiruchi and Thanjavur.

NLCs, Industrial Estate and BHEL

A mini industrial estate with 12 small units is to be set up in Neyveli Lignite Corporation complex. The units will be engaged in promoting downstream projects using NLC by products. It is sponsored by IDBI and will involve an initial investment of Rs. 100 lakhs. It is planned by ITCOT. In BHEL the workers union has taken up the problem faced by the unit of diminishing orders to which attention was called in Vol. XX pp. 278 and 329. Of the 48,000 MW for *VIII Plan, BHEL order book covers less* than 17 per cent of the needed equipment. Under bilateral aid, the multinationals of the aid giving country are providing the equipment. The demand is *for an increased order for VIII Plan from* BHEL.

ELCOT's Software Centre and MFL

The country's first software centre to help electronic entrepreneurs is coming up in Taramani involving an investment of Rs. 7.25 crores. It will be a one roof facility of telephone, fax and other data communication needs and testing facilities. Madras Fertilisers reports a subdued performance in 1989-90 due to suspension of phosphoric acid imports, a vital raw material for its NPIC production which therefore had to be closed for 3 months and operated below capacity for 2 months. Though the plant reached 130 per cent when subsequently its phosphoric acid supplies were restored, for the year its overall capacity use worked out to 27 per cent. It is important that import cuts are not made in vital inputs for the plants. MFL reports spending Rs. 22 crores on various projects aimed at pollution control, debottlenecking infrastructure constraints of power and water, increasing productivity, reducing energy consumption and equipment renewals.

MEPZ and Cuddalore Fertiliser Complex

Seven latex examination gloves units in MEPZ have been inactive for over a year because of the steep fall in international prices for the gloves — from $70 in 1988 to $18 in 1989. The plants and machinery for these units are worth Rs. 12 crores. The basic problem for their situation is the overestimation of US demand and going into the market when multinationals — Johnson and Johnson, Dunlop, Baxter Dickinson and Becker — had set up new plants with large capacity in Malaysia, Thailand and Korea. Apart from these, other units have helped flood the gloves market and so the Indian units with capacity for 346 million pieces are left high and dry. The units in MEPZ want the power tariff concessions promised by the government to new units and want to be exempted from the power price hike and the turnover tax. These need to be taken up with the government which wants the units to expand their production and exports. Madras Fertilisers has prepared a techno economic feasibility report on establishing a fertiliser complex near Cuddalore, using the Cauvery basin gas. The complex which will call for an investment of Rs. 1000 crores will meet the expected shortfall in nitrogen and phosphates in the southern states in four years' time.

Small Foundries and TANSSIA

The small foundries in the state which have been complaining of the short supply of pig iron (see Vol. XIX p.353 and Vol. XX p. 18) have adequate supplies this year mainly because of supplies from the Vishakapatnam plant. To ensure that this situation continues, it is proposed that the small industries association tabulate their annual requirements and arrange for a nodal agency to distribute the supplies. The nodal energy could be SIDCO. The Tamil Nadu Small Scale Industries Association (TAASSIA) is establishing a company to help SSI units to market their production. It has negotiated with the newly established Small Industries Development Bank (SIDB) to fund the company and has identified jet pumps as the first item from the SSI sector to be taken up under the consortium marketing plant and the development of a common brand name through out the country.

Takeover of Textile Mills, Textiles and Handlooms

The state government plans to take over 6 closed textile mills which have not been approved by BIFR which wants the state government to buy their equity shares. This is an election promise which was opposed by this Bulletin (See Vol. IX pp. 538 and 539) and now the government finds itself in the position when it does not have the funds to buy the equities. On the textiles front 250 small hosiery manufactures in Tiruppur have come forward to form a cooperative. This is a break through as it will improve their market and product. It is to be started on a 100 acre site in Tiruppur and will have shares of Rs. 100 with each unit subscribing Rs. 100. On handlooms, the Union government has stated that it will give top priority to modernisation of handloom, that it is setting up a committee of state ministers to work out a long term hank yarn policy, and that weavers were eligible for the Rs. 10,000 loan waiver and that of he 22 items reserved for the handlooms, no decision had as yet been made on how many will be placed in the Ninth Schedule. It is urgent that the govern-

ment make decisions on these pending issues to help the handloom industry and the weaver.

Industrial Estates and Newsprint Plant

An industrial estate to promote agro based industries is being set up in Nilakottai in Dindigul — Quaide Millet district. A second industrial estate to develop petro chemical industries is being established at Nagapattinam in Thanjavur district. In both estates SIPCOT will join hands with the private sector in industrial infrastructure development. Each estate will cost Rs. 30 crores. The industrial estate at Nagapattinam will use the oil reserves of the Thanjavur area and take advantage of MRL's distillary unit. Both states will follow the successful Hosur estate model. A second bagasse based newsprint plant is being planned with World Bank aid. It will follow the model of the first plant, TNPL, which announces a profit of Rs. 31 crores in 1989-90.

Amalgamation, TTK and standard Motors

Amalgamations is expanding and diversifying. Major expansion of the existing engineering unit — engineering plastics with German collaboration and the production of nickel cadmium batteries with French collaboration — at a cost of Rs. 30 crores are announced. To mark the 150 years of Simpson and Company 5 major engineering firms in the group are expanding and diversifying their production for the domestic and export market. In agriculture, seed production is to be developed and add to the services rendered to the farmers. The state government has offered a loan of Rs. 3 crores to reopen standard motors. Unless the company goes into the commercial vehicles — light and medium area — production, there is no future to its passenger car section. Like Amalgamation, the TTK group is also diversifying into the production of surgical gloves, syringes, needles, kitchen gadgets, new home remedies and drugs — at a cost of Rs. 20 crores. Its collaboration with LIG — is being widened and the two are sourcing TTK products for LIGs global markets.

Leather

The export of leather and leather products in 1989-90 touched Rs. 2030 crores against the revised target of Rs. 2000 crores, states the chairman of the council for leather exports. The share of value added exports increased from 1988-89 by 57 per cent to 65 per cent in 1989-90. The export of semi-processed leather had been banned from April 1990. The target for 1990-91 exports is Rs. 2700 crores, with FRG being the top importer followed by USSR and UK. The working group of the commerce ministry has recommended phasing out even finished leather exports by April 1, 1991 and that exports of this should be pegged now at the 1988-89 level. This is an important and ambitious target, to phase out finished leather exports and should be phased every quarter with the cooperation of the small tanneries.

IV. Education, Science and Health

Educational Reforms

The two negative developments in school education in July were — the first, the pre school teacher training course introduced in +2 schools in 1984-85 which has failed in the sense that those who qualified and were employed in classes 1 & 2 and not in the higher grades, but even more serious over 1000 of those who have qualified are still jobless and so the course has been abolished from the last academic year. This is to be regretted and shows lack of coordination between pre school authorities and those well qualified teachers. The second was the winding up of the open school started in 1984-85 under the aegis of SCERT. Started to help those who had passed class VIII to qualify for SSLC, over 2400 students have enrolled, including housewives and workers in government offices. First, its division 5 dealing with Distance Education was closed and then Division 4 dealing with Evaluation has been closed. This again is to be regretted as this was a very important educational avenue for those who could not attend the full time formal school. It was found that the diploma given was not treated as equivalent to SSLC but that does not matter to the house wives who were the majority of students. At the university level, UGC has circulated all states warning them against some 30 self styled bogus "universities" which are listed. The police should take action on them under the criminal law as they are cheating parents and students. In the state the revised guidelines for college admission for students from the mathematics, physics, chemistry and biology group have caused problems because colleges have been asked to give priority for BSc admission to those who have botony / zoology group. In the state the course is not offered at the +2 level. The university's approval of a new women's college in the city has sparked a controversy over whether it meets the UGC norms on land availability. This the college in question should meet and settle the disagreement. The World Bank in the study, India, poverty, employment and social service (1989) referred to earlier calls attention to the country spending less on education — 2 per cent of GDP in 1976-77 rising to 3.4 per cent in 1986-87, which is far below what is needed to universalise primary education and eradicate illiteracy. The absolute level of $10 per capita in 1986-87 is much lower than that of other developing countries like Thailand ($16), 4.2 per cent. Egypt ($32), 4.2 per cent. It agrees with the "Challenge of Education" that this is one cause for the heavy drop out rate.

Technical Education

The All India Council for Technical Education has recommended that the minimum qualification for admission to engineering degree course should be pass in the +2 science stream with a minimum 60 per cent in physics, chemistry and mathematics at a single sitting and the duration of the degree programme should be four years after +2. It has also stated that for SC & ST students the minimum marks will be as prescribed by the state government. It has also recommended an increase in the maximum fee level — from Rs. 500

per student a year to Rs. 12000 a year for degree course and Rs. 8000 for diploma course. The states are being consulted on this steep increase. The council also had before it the government's suggestion to abolish capitation fees by private colleges, while not discouraging private initiatives in this expensive form of education. As one means of cutting down on subsidising of higher education, the Union minister of education suggested at the meeting of the council the setting up of an education bank which could lend money, to start with for Technical education. It is time that this proposal was made and should be widely discussed before action is taken. Some other countries like Colombia, Venezeula have developed educational banks. UGC has upgraded 7 engineering and technology departments of 5 universities. The Planning Commission calls attention to the growing unemployment of forestry graduates. This needs looking into as to whether it is a question of the period of waiting before jobs are found and how this alleged unemployment can be reconciled with the shortage of forestry personnel to help develop the afforestation programme and the wastelands programme of the country. The Tamil Nadu Agricultural University Staff and Students are on strike because of the decision of the government to name the college GD Naidu college. The staff and students feel that the college and university has a long and hoary tradition as the Agricultural College and University and GD Naidu was not an agriculturist. This issue should be settled by discussion between the government and the staff and students as the state and country cannot afford any disruption in the education of its agricultural specialists. The Comptroller and Auditor General reports that between 1983-84 and 1988-89 49 faculty members of IIM, Bangalore did not take up their teaching assignment for various periods. For a management institution this is a poor record — as the staff concerned will be engaged in consultancy operation at the time when they ought to have been teaching. The Comptroller and Auditor general also called attention in the 1989 report to the misuse of funds by the Indian Council of Philosophical Research's chairman and director to visit UK and US to buy books which is a childish exercise and the misuse of Rs. 4 lakhs of Unesco coupons.

Satellite and Adult Education

INSAT-ID went into full operation on July 17 and was sending out normal television signals, telephone communication, meteorological forecast and radio net work and data collection. It has taken over all the operation of INSAT I-B. The Operation Research Group (ORG) reports that 21 per cent of adults in the country can read one or other publication. Kerala has the highest readership at 59 per cent. Among cities Bombay has the highest readership (69 per cent) followed by Madras (67 per cent). It reports a high degree of duplication between TV and the press.

Health

The union government has launched a sustained campaign to bring down the infant mortality rate (IMR) from the present 99 per 1000 live birth to 60 by the turn of the century, by improved vaccination, public education on acute respiratory infections and children's nutrition. Midwives are being educated on safe delivery, and lactating mothers about the importance of breast feeding.

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V. Employment and Labour Relations

The Planning Commission reports that despite the high growth of the economy in the VII Plan, there was not even half that rate in employment growth. As a result employment was growing at 2 per cent while labour force growth has been 2.5 per cent. Given the backlog of unemployment in 1985 (end of VI Plan) of 19 million people and the addition of the pool of unemployed, it is estimated that the VIII Plan is facing the task of providing employment to 60 million unemployed which requires an employment growth of 6 per cent per annum — against the current 2 per cent. The open unemployment rate is shown in the table below :

1976 1984 1986 1988
(Rs. Lakhs)

The Unemployment Rate

Age grp	Rural	Urban	All
15.29	4.54	13.39	6.54
30.44	0.66	1.55	0.86
45.59	0.40	1.03	0.53
All ages	2.15	6.35	3.04

The Union government reports that it has allocated Rs. 113.3 crores for three schemes for the Nehru Rozgar Yojana — namely micro enterprises, wage employment and employment through housing and urban shelter upgrading. Under this programme, Tamil Nadu has been allocated Rs. 907 98 lakhs.

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VI. Other Items

RBI Board of Directors

There was the Annual meeting of the Board of Directors of the Reserve Bank of India in Madras. The draft Annual report (1989-90) of the Bank was reviewed and its final adoption would be at the continuing meeting in September in Bombay.

Adult Literacy

The states Adult Literacy programme, specially in the International Literacy Year (ILY), was reviewed with the minister of education when the following decisions were made : a) The projects for making 5 districts and Madras city totally literate in the International Literacy Year is to be forwarded by the state government to the union government for funding : b) a convention of the main workers of the 5 districts and Madras city would be held soon and for this to seek the chief ministers convenience when the chief minister will inaugurate this ILY programme in Tamil Nadu : c) the minister will nominate his representative to the state committee coordinating this programme.

SRC & TNBCE

A meeting of the Governing Body of the State Resource Centre was held in mid July at which the activities of the centre, its programme of training the adult literacy supervisors, and publishing of the mass functional literacy booklets were approved. The programme for building the personnel headquarters for

SRC and TNBCE was discussed and finalised. The executive committee of the Tamil Nadu Board of Continuing Education followed which reviewed the programme of training the 4 adult education cadres, the programme of the triennial conference in October end in Madras and the work of the organisation in adult literacy in the south and east of the state.

IIC

The monthly panel discussion of the India International Centre was held on July 20 when the functioning of the fertiliser industry was discussed. The need for developing a mechanism to forecast the supply and demand for fertiliser for the country and for each state more precisely was underlined. This might also be one means of reducing the costly import of fertilisers which are stockpiled sometime for want of demand.

August Development Seminar

The paper for the August Seminar — Problems of Technology Generation, Absorption and Utilisation by Mr. R. V. Ramani appears as the first article.

Second Article

A note on Unorganised Rural Labour appears as the second article.

M I D S News

Dr. M.S.S. Pandian presented a paper on "The Image Trap : MGR in Tamil Politics" in a workshop on Popular Cinema organised by the Centre for the Study of Developing Studies, New Delhi in Mysore from 16th to 18th August, 1990.

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A meeting of the Institute's Academic Council was held on 22nd August.

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Dr. Nasir Tyabji participated in the Workshop on "Sickness in Engineering Industry" organised by CEI in Madras on 30th August and spoke on "Dimensions of sickness in the Southern States".

Problems of Technology Generation, Absorption and Utilisation

by

R. V. Ramani

Manager, Asian Peroxides Limited

1.0 While the concept of research as such has been part of the Indian Scientific scene for countries, the translation of such research into goods and services useful to the common man has not made much headway due to a variety of reasons. An attempt is made in this paper to analyse some of the causes and suggest some remedies.

2.1 India has had very many outstanding Scientists like Sir J.C. Bose, Srinivasa Ramanujam, C.V. Raman, Homi Bhabha and others. The work of many of our Scientists has been in the fundamental field and the emphasis on applied research has taken shape only in the past five decades or so. It has been realised that we as a Nation have immense strength in theoretical and fundamental science, the constraints imposed by financial and infrastructural facilities necessarily require that more emphasis be given to Research in the application of science. With this object in view several National Laboratories have been established throughout the country to deal with various disciplines. Unfortunately, even after several decades of operation, the vision of Pandit Nehru that these Laboratories are going to dramatically effect a technological change has not come true fully. No doubt, very many processes and ideas have been filed. But, actual contribution to the GNP arising out of these inventions is depressingly small.

2.1 One of the main reasons for this is the innate preference for the industralist for choosing "proven technology". What they have in mind is a technology which has been in operation in a major production unit abroad for at least 3 years. The Banks, the Financial Institutions as well as Government look for this track record before permitting import of such technology and before the

Financial Institutions undertake financial assistance. If a technology should have been in operation for 3 years, the engineering, & construction of the plant scale should have taken at least 3 to 5 years prior to that. In other words, the technology would be at least 10 years old before it is taken up for exploitation in the country. While in some fields such a time gap would not be of consequence, in many other fields a 10 year lead makes the technology obsolete compared to "State of Art". Particularly in fast developing areas like Electronics, where the degree of obsolescence is very great, such time gaps can be fatal.

2.2 Only recently the awareness about this state of affairs has become widely perceived and some steps are being taken to overcome this. The Financial Institutions have, to some extent, relaxed their norms and are willing to finance new technologies as well as development on a "venture capital" basis. A beginning has thus been made but very much more needs to be done in other areas.

3.1 There are wide gaps in perceptions in absorbing technology from abroad. Very often, particularly in cases where the technology vendor does not participate in the venture in India, he contents himself with supplying the basic technology package, leaving the detailed engineering, installation and operation to the entrepreneur in this country. During the earlier part of this century, on the other hand, enterprises, particularly Government enterprises, went in for "turn-key" projects, where the foreign technology supplier supplied also the necessary engineering and procurement of equipment as well as installation and commissioning services. While this ensured that the project went onstream and fulfilled performance guarantees, it did not ensure that the plant would continue to operate under optimum efficiency and conditions. This was because of the lack of awareness on the part of the technology supplier to the peculiarities of local problems and infrastructure. For instance, a simple thing like power failures are very rare abroad while it is a matter of everyday occurence here. Unless the equipment is designed to operate under local conditions the enterprise cannot be successful.

3.2 Therefore the other alternative where the engineering, plant construction and implementation are to be done by local consultants is preferable. Unfortunately the growth of professional consultancy organisations has been slow and the total number of really competent professional organisations equipped to do this job in this country is less than 100.

Again, even these try to cover all areas of industrial activity without confining themselves to specialised areas where they can build up expertise and data banks. No doubt there are outstanding exceptions to this observation, but that does not apply to a large majority of the organisations.

4.0 Another problem encountered in transferring and assimilating imported technology is that of size. Whenever processes are obtained from abroad, it is found that in many instances the scale of operations is very much less in a developing country like ours and consequently the process has to be re-engineered to the sizes applicable to the local scenario. While in some cases this will be possible, more often than not, a reduction in size of operations would throw the process efficiencies

and economies out of the window. While the plants might work, the economies would go all anory and the plant would produce material at a cost several times that produced from the same process elsewhere.

5.0 Turning now to development of indigeneous technology, some of the National Laboratories have made significant breakthroughs and have come up with the invensions which are important even in the international scenario. However, most of the laboratories and research institutions do not have financial resources or the infrastructural facilities for scaling up the experiments to a level where it can be straightaway applied to an industrial scale production. While a product can be manufactured on a gram scale in the Laboratory, there are many stages of development before the same product can be produced on a tonne scale. In most cases the process can be scaled up by a factor of 10 to 20 times. Therefore, the process has to undergo scaling up at least 4 to 5 times before a semi commercial operation can be established to prove the process on at least a reasonable scale to establish its viability. Unfortunately the laboratories do not have facilities for carrying out these stages of upscaling nor the resources to do the dedugging at different stages.

The only way in which this gap can be bridged in our present circumstances is for the Research Laboratories to tie up with existing industries in similar fields where much larger infrastructural facilities are available to support such scaling up.

This necessarily calls for a close interaction of the laborataries with industries. On the one hand, the industrial units are pre-occupied in doing their routine operations and are not favourably disposed to deploying their time and personnel as well as monetary resources in exercises like developmental work in collaboration with the laboratories, which might or might not yield fruit. The laboratory academics on the other hand tend to look upon the factory personnel as people in a more mundane plane incapable of appreciating the academic height of their research. This personality gap has to be first bridged and the captains of industry sold the idea of deploying at least a small part of their profit to encouraging joint R&D effort between the laboratories and the manufacturing units. To provide an incentive for this, until a few years ago, the Government was giving fiscal incentives of write off of 1.1/3rd times the actual expenditure for taxation purposes. Unfortunately this concession has been withdrawn, due to abuse in a few cases. Restoration of this incentive would go a long way to promoting academics-industry interaction.

Another important factor which stands in the way of indigenous process development is the non-availability of specialised materials and machines. Some of the exotic material of construction required for the chemical industry or the light engineering industries, such as special alloys, corrosion resistant materials, etc., have necessarily have to be imported. Similarly, specialised machines required for processing of exotic materials also have to be imported. Local demand is not sufficient to make indigenous manufacture of the very few such machines required a viable proposition. Unfortunately such imports are clubbed along with other imports and a prohibitive duty burden is imposed, quite apart from the basically high value of the import due to currency fluctuations. One way to overcome

this problem would be to give concessional rates of duty at virtually nil rates for such purposes, building in necessary safeguards against abuses.

6.0 One area where very little attention has been paid either, with the imported technology or development of indigenous technology is in packaging. Packaging is looked upon generally as an inevitable concommitant of manufacture and sufficient attention has not been bestowed on this field. In the particularly drastic conditions of transportation and cargo handling that prevails in our country of distances, packaging is of very great significance. Manufacturers do not appreciate the need for ensuring that their goods reach the hands of the consumer in the manufactured condition and they tend to blame it all on improper and inefficient handling. What needs to be done is to take into consideration all the hardships that the package may be put to and design it accordingly. Here a weak effort has been made to start an Institute of Packaging but its impact on the general level of packaging of consumer goods has unfortunately not been significant. There were very many instances where the lack of proper packaging has defeated the very purpose for which the item is manufactured.

7.0 Talking of technology, very often technologies are evolved or imported without due regard to the local conditions under which they have to operate. There are no technologies available or developed elsewhere in certain areas which are of special need to our country. Unfortunately not much thought seems to have gone into this aspect. For instance, everybody is aware that a bicycle has come to stay as the common man's means of transportation. While the original import from the U. K. over sixty years ago was designed for carrying a single person, today it is being used in all parts of the country to carry two or sometimes three persons, plus a lot of cargo and freight. No effort has been made to develop a bicycle that can comfortably carry two or three persons nor an easily manageable vehicle which can carry the small amounts of freight that can conveniently be taken on a two wheeler. It should be relatively easy to develop a tandem bicycle for carrying at least two persons on to comfortable seats or of a two wheeler with adequate provision for carrying packages and freight. The point really is that our technologists have not given sufficient thought to such mundane things.

But the development of relevant technology which can straight away be translated into products of use to the common man, however mundane such technologies can be, would make a significant contribution to a broader social purpose in our context.

Unorganised Labour and Rural Development*

Scope

The scope of the term unorganised labour is wide and subject to change. It is some times used, as the title suggests, to refer to the workers employed in the organised and unorganised sectors of the economy : or to the area involving workers in the traditional as against the modern sectors of the economy : or to the dichotomy between the workers in the capitalist or subsistence sectors of the economy : or the sector which gives workers protection as against those which leave its workers unprotected : or to the distinction made between workers who are regularly employed (full time all the year round) as against the casual workers ; or to the distinction between labour employed in large enterprises, and those working in small, village, or tiny units : and finally more recently and increasingly to workers in what is called the formal or informal markets.

What is common to unorganised rural labour in all the variegated areas listed above, which is the subject of this note, is that such labour is a) non unionised and so has no protection from a trade union, b) in reality unprotected by state legislation, regulating conditions of work and has limited or no access to government, c) involved in traditional, indigenous technology which is physically demanding, and d) found in small scale agricultural and allied (dairying, poultry, fishing, forestry) and non agricultural rural occupations.[1] This is not a definition but an empirical description of the unorganised rural labour in the country, and is at the heart of the programme of rural development to which the Plan from its inception has been committed and which has received new content and urgency in the Eighth Plan.

Some generalities

In dealing with the problem of unorganised rural labour within the programme of Rural Development, the question of whether such labour is a transitional phenomenon which will cease

* Abstracts of the article by Dr. Malcolm S. Adiseshiah for the Special August 15 Issue of Yojana, New Delhi, June 11, 1990.

to exist as the rural area, led by agriculture and allied activities become capitalistic, or whether it is a sector nurtured by capitalist production for its use and exploitation, or whether it is an autonomous sector which has its own roots and inescapable being, which will resist the inroads of capitalism and its alleviating efforts, must be faced in devising the Rural Development strategy.[2] I am inclined to the third (last) option, modified with some inputs from and to the capitalist modern sector, which at the same time is open to some exploitation by the urbanised modern sector. This preferred option follows from the historical persistance of the peasant type of organisation centred in the family farm, using in the main non wage household labour and some extra household labour, with its competitive advantage over capitalistic forms of production, following from the absence of the profit factor, and its replacement by the intensive fragmented competition, involving harder work styles and minimal consumption, which in the case of non peasant (landless) workers provides a fertile ground for exploitation. That is, basically unorganised labour whether in the rural or urban area is coterminous with poverty, because whether it be the marginal farmer, or landless labourer, or the migrant urban slum worker, they are each involved in a set of survival activities on the margin of poverty. This is brought out in the 29th round of NSS and the ORG survey which are set forth below.

TABLE 1

	Household size	Seniors per household	Monthly income per household (Rs)	Monthly consumption per household (Rs)	Outstanding loan per household (Rs)
1. Small cultivation house hold.	4.52	1.17	98	124	335
2. Non cultivation wage labour household	4.13	1.78	100	111	210

Source : Sarvekshana Vol.1 No. 1

This table which shows that the average monthly incomes of the small cultivator household and landless worker are around Rs. 100, with the major part being from wages for both, is one reason why in unorganised rural labour both the small (marginal) farmer and landless labourer are included.

TABLE II

Income of Slum workers in Madras City

	Monthly Income Group Rs. 0-150 %	Rs. 151-350 %	Rs. 350+ %	Total	Average Monthly Income Rs.	% of workers of total in workers in the slum
Employment Status	68	29	3	100	144	21.80
Self Employed	72	24	4	100	140	50.00
Family Enterprise workers	49	30	21	100	181	2.6

Source : ORG, 1980

The above table shows that 74 per cent of urban slum workers have a monthly income of Rs. 140 — Rs. 180, which allowing for the higher urban cost of living is below the monthly income of the rural households recorded in Table I. This is one reason that urban slum workers are also classed along with rural workers, who are both in the unorganised scctor.

Composition

The 28th round of the NSS gave the following breakdown of the composition of rural labour.[3] The estimated rural working population is 198 million to which the usually unemployed should be added, giving a labour force of 201 million — 139 million males and 61 million females. Rural workforce was in the main in the unorganised sector : 60 per cent are self employed or employed in family enterprises : 40 per cent are wage earners, of whom 75 per cent of male workers and 90 per cent of female workers are casual labourers. 80 per cent rural male workers and 86 per cent of female labourers are employed in agriculture, animal husbandry, fishery and forests. Table 3 & 4 give the pattern of labour use in rural India and distribution of the pattern by agricultural operation and sex.

TABLE III

	All activities Family	Regular employees	Capital labour	Total	Agriculture Family	Regular	Casual labour	Total
Male	30.2	5.3	9.7	45.3	25.2	2.4	7.8	35.4
Female	11.0	0.8	5.6	17.3				
Total	41.2	6.1	15.3	62.6	34.5	2.7	12.6	49.9

Source : Sarvekshana 1981

TABLE IV

Operation	% distribution of total labour input			Ratio of female to male labour by type of labour			
	Male	Female	Total	All	Family labour	Casual labour	Regular workers
Ploughing	14.0	1.5	10.3	0.048	0.04	0.05	0.003
Sowing	2.0	1.6	1.9	0.332	0.27	0 61	0.11
Transplantation	2.7	5.8	3.6	0.868	0.50	1.53	0.45
Weeding	7.2	14.7	9.7	0.831	0.66	1.32	0.22
Harvesting	12.7	19.5	14.7	0.629	0.52	0.90	0.23
Other manual work in agriculture	55.9	53.8	55.8	0.393	0.40	0.47	0.11
Non-manual work in agriculture	5.5	3.1	4.8	0.227	0.23	0.32	0.98
Total	100	100	100	0.408	0.37	0.62	0.11

Source : Sarvekshana, J-0 1981, S 37—S 38

Some Worrisome Features of Unorganised Labour

Employment

The 1981 census data shows that 64.6 per cent of the total 241.61 million workers are engaged in agriculture where the line between self employment and wage employment is hazy and where agricultural workers are the majority of the unorganised and weaker sections of the workforce.[4] And here in regard to the majority agricultural workers, it is important to recall that the 32nd and 38th rounds of NSS refer to the under-employment of those workers being 19.07 per cent and 21.04 per cent, which is more serious than their full time un-employment, which it establishes at 3.74 per cent and 3.97 per cent. Applying these rations of underemployment to the current labor force of 241 61 million workers, it is found that 64 million of marginal farmers and landless labourers (usual status) are underemployed, and 9 million fully unemployed Thus the un-organised rural labour — whether in farm or nonfarm employment—are a) seriously under employed and b) to a letter extent totally unemployed.

Casualisation

The mid term appraisal of Seventh Plan calls attention to a major structural change taking place in the rural work-force as between the years 1971 and 1982-83. (There is need to accept some delay to get the results on this aspect from the 43rd round of NSS which was just concluded). The change was a double one: first an increase in the percentage of landless workers from 9.6 percent of the workforce in 1971 to 11.38 in 1982 (and an estimated 14 per cent in 1989). The second is the decline in the percentage of self em-ployed workers and a sharp and conti-nuing increase in casual workers which Table below bring out:

TABLE V

Category	Male			Famale		
	1972-73	77-88	1983	1972-73	1977-78	1983
Self—employed	65.90	62.77	60.40	64.48	62.10	62.21
Wage employed	12.06	10.97	10.77	4.08	2.84	3.10
Casual labour	22.04	26.66	28.83	31.44	35.06	34.60

Source: Sarvekshana Vol. 14 No. 4

This disturbing increase in the percent-age of casual workers is attributed to a) decline in the average size of land holding of the rural household which results in its being leased out and the marginal owner becomes a wage or casual labourer, b) the breakdown of the traditional semi feudal system — jajmani, share cropping, etc and c) increased commercialisation of the rural economy to which reference is made later. Rural unorganised labour is be-coming increasingly casualised.

Commercialisation

Several factors which are making both for commercialisation of agricultural and agri industries have resulted in the proportion of wage labour in the rural workforce rising and for that wage labour to be growingly casualised as just noted. The growing commercialisa-tion of agriculture has intensified the process of widening and the inte-grating of rural market, which have led to relocation of traditional rural industry, and allowed urban products increasingly to penetrate the rural market. These trends have fed under employ-ment and unemployment of unorganised agricultural labour

Non farm labour

The commercialisation of agriculture which has been fed by the rapid growth of rural-urban transport, improved com-mercial net works have pushed (or pulled) increasingly the underemployed

rural labour to migrate to towns in search of employment referred to earlier, or use the improved transport facilities to continue living with their rural homes and commute to their jobs in nearby towns. There is as yet no comprehensive information of the trend in the move of the unorganised rural labour to urban areas, except the growing volume of data on slums in the 12 metropolitan centres of the country, which give an impressionistic picture of this being a growing volume. The question is however posed, why the non agricultural sector — both urban and rural — is not able to absorb all the available surplus labour from the rural areas".[5]

Minimum wages

The minimum wage legislation is for the present the most important issue for rural unorganised labour. The National Institute of Labour (NIL) in a survey for the parliamentary consultative committee on labour reports that there are 115 million unorganised workers; that the minimum wages for them fixed by the states range from Rs 8.50 to Rs. 12.75 per day — which at the higher level works out to Rs. 3600 per annum, and which given the poverty line of Rs. 6400 per annum, means that all minimum wages in all states, except Kerala, forces the unorganised workers to live in poverty. What is worse is that even those low minimum wages are not enforced in any state, except Kerala ; that records and registers that are required to be maintained are not maintained : that the actual wages and other payments in kind are about 50 per cent of what is legislated.[6] Here is a serious point of exploitation of the unorganised labour.

Bonded labour

One of the most scandalous features of the system of unorganised rural labour is the system of bonded labour. The NIL reports that the implementation of the Bonded Labour System (Abolition) Act of 1976 is tardy, and attempts to give the impression that the problem has been solved by the government, which reports smaller and smaller numbers of those still in bondage, and large numbers being freed, and even larger numbers being rehabilitated ; whereas data published on the basis of surveys by the Gandhi Peace Foundation, the Labour Bureau and the Ministry of Labour show that the bonded labourers number 262 lakh, of whom only 21 lakhs have been freed, and 16 lakhs rehabilitated. The Comptroller and Auditor General in his report to Tamil Nadu in 1987 refers to the 4-8 years that is taken for rehabilitation against the legal requirement for immediate rehabilitation and to the fact that because the initial cultivable land and housing sites are completely unsuitable some of those freed return to their bondage. Bonded labour seems to be an inescapable part of unorganised rural labour.

Social Security

The country's social security system — covering old age pensions, health and sickness, insurance, accident compensation, maternity benefits, payment of gratuity, unemployment relief — completely exclude 90 per cent of India's workforce and all of the rural unorganised labour. In a thought provoking analysis of this situation, and what can be done for providing a minimum of social security here and now, with the limited resources available to the government at the union and state levels, a

three point action plan is proposed covering the unorganised poor in the rural labour sector which need not wait till the country becomes rich and poverty is abolished. It proposes that the social security system can be closely targeted towards the poorest deciles, who are not or will ever be reached either by the growth process or the anti poverty programmes — IRDP, JRY etc. The plan involves a) the enlargement and improvement of promotional programmes for employment generation, drought relief, primary health care medical anti natal and maternity facilities, rehabilitation of the handicapped, widows and orphans living in poverty : b) the creation and maintenance of a nation wide old age pension scheme for those living in poverty : c) the extension of life insurance for the poor with a subsidy from the union and state government as a measure of survival benefits.[7] This social security system for unorganised rural labour is practical and viable and should be given serious consideration.

Institutions for Enforcement

From time to time, the union government announces in Parliament the setting up of machinery to safeguard the interests of the unorganised Rural Labour. There has been a central standing committee on rural unorganised labour and a rural working cell. In the Budget session of parliament in 1987 the government announced the setting up of a national commission on Rural labour and actually established it in August of the year. There has been a committee on unorganised labour and the reconstitution of the National Commission on Rural Labour in June 1990. What is needed to help the unorganised rural labour is i) for the National Commission on Rural Labour to function primarily with a view to ii) monitoring the implementation of minimum wage legislation by the states as suggested by the 1986 labour ministers conference, which will also see to the states reviewing minimum wages every 2 years and using not only the inspectors but also the revenue, rural and panchayati raj personnel for its enforcement and iii) make a start on the 3 point social security system for the unorganised rural poor, particularly for those not being reached by any other programme.

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